

REVISION OF THE SPECIES OF APLYSIA OF THE  
MUSÉUM NATIONAL D'HISTOIRE NATURELLE  
(MALACOLOGIE), PARIS.

By N. B. EALES.

*Aplysia brasiliana* Rang 1828.

SYNONYMS : *Tethys floridensis* Pilsbry 1895. Probably only a variety, as the two are similar in most respects. The Florida specimens are darker, with somewhat larger parapodia. — *A. livida* d'Orbigny 1837. — *A. guadeloupensis* Sowerby 1869, named from the shell only. — *A. caileti* ? Deshayes 1857.

DISTRIBUTION : Atlantic Ocean, from New Jersey in the North to St. Helena in the South, from Florida, the West Indies and Brazil in the West to Ghana in west Africa.

Large bulky body, self coloured or spotted, simple cephalic tentacles, slender rhinophores set close together, long pike-shaped penis, narrow foot, very large parapodia joined low down posteriorly, tubular mantle aperture, compound opaline gland with single aperture, simple radula. Young specimens may have a hole in the mantle. Magenta secretion.

— Guadeloupe. M. LHERMINIER, 1826 (2 ex.) et 1836 (1 ex.). M. BEAUPERTHUY, 1844 (1 ex.).

— Mexique. M. SALLE, 1835 (2 ex.). M. SCHLUMBERGER, 1858. (1 ex.).

— Rio de Janeiro. M. GAUDICHAUD, 1831. (1 ex.).

*Aplysia cervina* Dall and Simpson 1901.

DISTRIBUTION : Atlantic seaboard from Eastern U.S.A., through central America and the West Indies to Brazil.

Smaller and plainer than *brasiliana*, of moderate size, usually with scattered brown spots on the sides of the body, vertical bands of dark and light on the inner sides of the parapodia, small head and plain cephalic tentacles, short broad flattened penis, narrow foot, low joined parapodia, small open papilla on the mantle, compound uniporous opaline gland, constricted plate of the rhachidian tooth and bulbous heads of the laterals.

MacFarland monographed the species in 1909.

— Charleston, 1881. (1 ex.).

*Bulletin du Muséum*, 2<sup>e</sup> série, t. XXIX, n<sup>o</sup> 3, 1957.

*Aplysia californica* Cooper 1863.

SYNONYM : *A. ritteri* Cockerell 1902.

DISTRIBUTION : West coast of America, from California to the Gulf of California.

Very large, up to 375 mm. long, bulky, soft, clumsy. Foot broad with long slender tail, short but imobile parapodia joined low posteriorly, closed mantle with papilla, purple glands, broad flat shell with accessory plate and no spire, radula with elaborate but irregular denticulations, broad tapering penis, compound uniporous opaline gland.

— Golfe de Californie. M. DIGUET, 1898. (1 ex.).

*Aplysia dactylomela* Rang 1828.

SYNONYMS : *A. d.* var. *aequorea* Heilprin 1888 ; *allochroa* O'Donoghue 1928-30 (non Bergh 1908) ; *angasi* Hedley 1918 and 1923 Sowerby 1869, *Siphonota keraudreni* Angas 1867, non Rang ; *annulifera* Thiele 1930 ; *argus* Rüppell and Leuckart 1828 ; *benedicti* Eliot 1899, Bergh 1905, 1908 ; ? *chierchiana* Mazzarelli and Zuceardi 1892 ; *fimbriata* Adams and Reeve 1848 ; *lobata* ? Bergh 1908 ? Juvenile ; *megaptera* Verrill 1901 ; var. *ocellata* d'Orbigny 1835-44 ; *operta* Burne 1906 ; *panamensis* Pilsbry 1895 ; *protea* Rang 1828 ; *radiata* Ehrenberg 1831 ; *schrammii* Deshayes 1857 ; *scutellata* Ehrenberg 1831 ; *sowerbyi* Pilsbry 1895 (*A. tigrina* Sowerby 1869) ; *tigrina* Rang 1828 ; *velifer* Bergh 1905 ? juvenile. — *Siphonota viridescens* Pease 1868. — *Siphonota keraudreni* Angas 1867.

Sowerby's *A. guadeloupensis* may be *dactylomela* or *brasiliانا*.

DISTRIBUTION : World wide in warm seas. Recorded from Bermuda, Florida, the west Indies, Mexico, Panama, Brazil, the Canaries, Cape Verde Islands, Ghana, Red Sea, Ceylon and India, Mauritius, South Africa, China, Japan, the East Indies, the Philippines, Samoa, Tonga, the Gilbert Islands, Australia and New Zealand.

Large Aplysias, bulky and coarse, usually with basic yellowish green colour, large irregular rings on the sides of the body and often a single ring on the middle line of the head. The rings bleach gradually with preservation, but persist for a very long time. Rhinophores thick with short notched apices. Foot broad with blunt tail. Parapodia well developed, sometimes frilled on the edges and joined low down posteriorly. Penis broad, spatulate at the tip and spirally grooved. Compound trihedral uniporous opaline gland. Purple secretion from the mantle glands. Lateral teeth of the radula with long, straight smooth cusps.

- Ile de France. M. DESJARDINS, 1839. (5 ex.).
- Grande Salvage. M. GARRETA, 1911. (2 ex.).
- Tolosa. M. RICHARD. (1 ex. juv.).
- Mer Rouge. M. LEFÈVRE. (3 ex. juv.).
- 1 ex. juv. sans origine.
- Mexique. M. SCHLUMBERGER, 1858. (1 ex.).
- Canaries. M. RIPOCHE. (1 ex.).

*Aplysia (Tullia) juliana* Quoy and Gaimard 1832.

SYNONYMS : *A. badistes* Pilsbry 1951. — *A. bipes* Pease 1860 as *Siphonota*. — *A. capensis* O'Donoghue 1928. — *A. rangiana* d'Orbigny 1832. — *A. sandwichensis* Sowerby 1869. — *A. sibogae* Bergh 1908. — *A. petiti* ? Risbec 1929. — *A. woodii* Bergh 1908.

*A. brunnea* Hutton 1875 and *A. hamiltoni* Kirk 1882 are probably synonyms. *A. sorex* Rang 1828 is not the specimen in the Paris Museum, and if authentic is a juvenile.

DISTRIBUTION : World wide from 40°N. to 40°S. Florida, Brazil, the Canaries, Morocco, Ghana, Kenya, Mauritius, Madagascar, the Seychelles, Pakistan, India, South Africa, China, Japan, the East Indies, Formosa, Caroline Islands, Hawaiian Islands, Australia, Tasmania, New Zealand, California, Galapagos, Peru, Chile.

The body is low and bulky, the foot broad with a posterior sucker on the tail used for looping movements. Parapodia thick and natatory, joined high up posteriorly forming a mantle cavity pocket. Mantle with oval foramen. White secretion from the mantle glands. Opaline gland simple, multiporous. Large radula with feeble denticulations. Broad salivary glands. Caecum crozier-shaped. Penis broad at the base, pointed at the tip. Large bulbous penis sheath, the lining of which is beset with numerous spiny warts. Only in the sub-genus *Tullia* are these spiny warts present. Shell variable according to geographical location, both broad and narrow shelled varieties occurring, the former from Japan to the Cape, the latter from Australia and the South Pacific.

- Bombay. M. DUSSUMIER, 1835. (1 ex. juv.).
- Madagascar. (5 ex.).
- Tuléar, Madagascar. M. GRANDIDIER, 1905. (2 ex.).
- Chili, M. FONTAINE, 1834. (1 ex.).
- Fort Dauphin, Madagascar. (1 ex.).
- Océanie. (1 ex.).
- 2 ex. sans origine.
- Détroit de Cook. M. FILHOL, 1875. (1 ex. var. melanic).
- Ile de Bourbon. M. DESHAYES, 1870. (3 ex.).
- Maroc, M. BUCHET, 1903. (3 ex.).
- Ile des Pins. (1 ex.).
- Yokohama. BOUCARD, 1903. (19 ex.).

*Aplysia pulmonica* Gould 1852.

DISTRIBUTION : Samoa, Hawaii, Australia, South-east Asia.

Has a superficial resemblance to *A. dactylomela*, but is smaller and shows no traces of the rings on the skin. Usually less than 150 mm. in length, preserved about 85 mm. Rather broad and flat. Skin moderately soft but not flabby, may contract to form crocodile skin appearance. Skin pattern reticulate or lined on a dark bronze green background. Foot dark, inner sides of parapodia with dark blotches, mantle blotched all over with black. Head broad, neck short and thick, rhinophores short and stout, close together. Foot broad with pointed tail, small parapodia joined low down behind. Mantle with tubular foramen and usually starry rays, opaline gland compound uniporous. Shell broadly ovate with oblique apex. Radula simple. Penis broad and flat.

- Oahu, Hawaiian Islands. M. BALLIEU. (1 ex.).
- Cochinchine. M. GERMAIN, 1867. (1 ex.).
- Hawaiian Islands. M. BALLIEU. (2 ex.).

*Aplysia punctata* Cuvier 1803.

SYNONYMS : see Pilsbry 1895, p. 71.

DISTRIBUTION : Mediterranean, Atlantic Coasts from Greenland, Norway and the Baltic to the Canaries. The common British species.

Of medium size, elongated when alive, humped in the « sitting hare » position when preserved. Colour very variable, but usually olive green or rich velvety brown, the colour of *Laminaria* weed. White or grey spots common and black reticulations. Olive and brown colours are extracted with preservation. Skin smooth and soft. Head elongated, cephalic tentacles mobile, rhinophores long, tapering, eyes plain, on white areas. Foot narrow and soft, adapted for crawling up the stipes of *Laminaria*. Parapodia well developed, natatory, joined high up behind, forming a mantle cavity pocket. Mantle thin, with oval, flat aperture, large in young animals. Anal siphon ample, purple glands secrete abundantly. Opaline gland simple, multiporous, genital aperture smooth edged. Shell convex, delicate, ovate, apex incurved, anal sinus long, shallow. Radula small, about 40 rows and 15-18, 1. 15-18 teeth in a row. Caecum with only the curved tip visible on the surface of the digestive gland. All the ganglia of the nerve ring rounded and separate. Penis short, broad, leaflike.

- Rade d'Hyères. M. ROUSSEAU, 1858. (1 ex.).
- Méditerranée. (1 ex.).
- Sans origine. (1 ex.).
- Marseille. M. DESHAYES, 1874. (2 ex.).
- St. Vaast, 1900. (1 ex.).
- Marseille. M. BARBAU. (1 ex.).

- Méditerranée. M. LUCAS. (1 ex.).
- Née. (1 ex.).
- Palerme. Ach. CARON, 1836. (2 ex.).
- Boulogne. M. BOUCHARD, 1845. (1 ex.).
- Messina. M. Constant PRÉVOST. (1 ex. juv.).
- Cherbourg. M. VALENCIENNES, 1839. (1 ex.).
- 1 ex. juv. sans origine.

*Aplysia parvula* Möreh 1863 (Guilding MS).

SYNONYMS : *allochroa* Bergh 1908 (non O'Donoghue); *anguilla* Cuming MS. Sowerby 1869; *atromarginata* Bergh 1905; *australiana* Clessin 1899; *concava* Sowerby 1869; *elongata* Pease 1866; *fusca* ? Tilesius 1812; *intermedia* Farran 1905; *japonica* Sowerby 1869; *lobata* Bergh 1908 (or this may be young *dactylomela*); *monochroa* Bergh 1908; *nigrocincta* Martens 1880; *nigromarginata* Risso 1818; *norfolkensis* Sowerby 1869; *orientalis* Sowerby 1869; *paeteliana* Clessin 1899; *peasei* Pilsbry 1895 as *Tethys*; *peregrina* Thiele 1925; *punctata* ? Hirase and Takahashi 1934; *rosea* Sowerby (non Rathke 1799); *sieboldiana* Clessin 1899; *spuria* ? Krauss 1848; *subquadrata* Sowerby 1869 (non Gould); *trigona* Sowerby 1869. — *Aplysiopsis juanina* Bergh 1898. — *Siphonota punctata* Pease 1866.

DISTRIBUTION : World wide in warm seas, from approximately 40°N latitude to 40°S. Florida, many islands of the west Indies, Brazil, Morocco, Senegal, the Azores and Madeira, Gulf of Aden and Mauritius to the Cape, Japan, China, the East Indies, Samoa, the Hawaiian Islands, the Society Islands, Australia, New Zealand, Southern California.

Mostly small or very small Aplysias, rarely reaching more than 60 mm, but when alive the tail may be elongated to give a greater length. Body rounded and neat, typically higher than wide. Skin soft. Colour very variable, purplish black, dark brown, tan, yellow, greenish grey or green, speckled with white or cream. The variety *nigrocincta* has the mantle foramen, siphon, parapodia, rhinophores and cephalic tentacles, anterior border of the foot and tip of the tail bordered with black and orange. Head small, neat, neck long. Penis broad at the base, tapering. Foot narrow, pale, with slender pointed tail, often contracted to give a wavy edge. Parapodia short, not very mobile, fused posteriorly high up. Mantle thin, with a large oval foramen. Purple glands well developed. Opaline gland simple, multiporous. Shell large for the size of the animal, oval or nearly circular, deeply concave, the apex with a distinct spire, anal sinus short and not deep. Typical radular formula  $30 \times 16.1.16$ .

Rhachidian tooth with characteristically short and deeply incised plate and many denticulations. The nervous system is primitive in that all the ganglia of the nerve ring are distinct, the pleurovisceral cords are rather short and the visceral ganglia are separate.

- Nouvelle-Hollande. M. VERREAUX, 1844. (2 ex.).
- 10 ex. sans origine.
- Golfe de Californie. M. DIGUET, 1904. (1 ex.).
- Brésil. M. CLASSÈNE, 1842. (2 ex.).
- Açores. M. COLLOT, 1892. (1 ex.).
- Sénégal. M. HEUDELOT. (1 ex.).
- Détroit de Cook. M. FILHOL, 1875. (1 ex.).
- Setubal. M. NEUVILLE, 1897. (3 ex. var. *nigro-marginata*.).

*Aplysia cornigera* Sowerby 1869.

DISTRIBUTION : India, Ceylon, Indo-China, the Philippines.

Of moderate size. Brownish olive with clear spaces and black spots also fine reticulations. Mottled pigment on the inner sides of the parapodia near the edges and the mantle. Skin smooth and not strongly contractile. Rhinophores slender, rounded, set well back, close together. Penis short, flat, sickle-shaped, the spermatic groove lying along its edge. Foot narrow with long pointed tail. Parapodia with smooth or slightly sinuous margins, united low down behind, but forming a low wall shutting in the mantle cavity. Mantle with minute foramen or closed with radial markings around the point of closure. Purple gland. Genital aperture smooth, crescentic, pigmented, the duct raised beneath the mantle cavity floor. Opaline gland simple, multiporous. Shell thin, delicate, deeply concave, broadly ovate, anal sinus short and shallow. Radula  $40 \times 30$ . 1. 30, without special features.

- Côte de Malabar. M. DUSSUMIER, 1836. (6 ex.).
- Indochine. M. KREMPF, 1910. (1 ex.).

*Aplysia depilans* L. 1767, Gmelin 1791.

SYNONYMS : see Pilsbry 1895, p. 69.

DISTRIBUTION : Mediterranean, Atlantic coasts of France, Spain, Portugal and occasionally Great Britain, Morocco, Rio de Oro, Madeira, west Africa (Senegal, Ghana, etc.).

Large, low and bulky, with flat, pig-like head. Light brown, grey, or dark with irregular white and grey blotches. Said to have an odour of musk. Head broad, neck short and thick. Penis broad, black, with spiny warts on the lining of the sheath. Foot broad with a short blunt tail which may be used as a sucker. Parapodia not large, united posteriorly high up, enclosing a mantle cavity pocket. Mantle with oval or round, flat aperture, sometimes with rays. No purple, white secretion from the mantle glands. Opaline gland simple multiporous. Genital aperture plain edged. Shell rather narrow with deep, short sinus. Radula large,  $80 \times 33$ . 1. 33. Caecum spirally coiled, crozier-shaped. This species should be included in the subgenus *Tullia* Pruvot-Fol.

- La Rochelle. M. d'ORBIGNY. (3 ex.).
- Brest. (1 ex.).
- Bassin d'Arcachon. Dr. SIGALAS, 1927. (1 ex.).
- 1 ex. sans origine.
- Sans origine. M. COSTE. (1 ex.).

*Aplysia extraordinaria* Allan 1932.

DISTRIBUTION : New South Wales, Australia, Hawaiian Islands.

Large, fleshy, active. Umber brown, with reticulate black veining and scattered brown or black spots. Parapodial edges light, then dappled with light and dark pigment. There may be light spots on the sides and vertical white bands. Head long and narrow, small. Rhinophores pointed, close together, set very far back. Penis short, broad at base, pointed, curved. Foot long and narrow, with slender tail, edges defined and project as a flange. Parapodia large, rounded, flabby, unite behind low down forming a platform-like extension of the mantle floor, edges sinuous. Mantle small, with small foramen, anal siphon wide, purple glands. Mantle cavity open at both ends. Ctenidium large, opaline gland simple, multiporous, genital aperture small, smooth edged. Shell broadly ovate, anal sinus shallow. Radula  $70 \times 32$ . 1. 32 with elaborate denticulations towards the middle of the row.

- Hawaiian Islands. M. BALLIEU, 1874. (1 ex.).

*Aplysia inca* d'Orbigny 1837.

DISTRIBUTION : Pacific coast of Peru.

Medium to large, soft and flabby, shrinking considerably when preserved, when alive violet, with rounded white spots on sides and head. Parapodia with a border of clear rose-violet and large rounded or angular white blotches on a purple brown ground. Mantle violet. Head small, neck very short. Cephalic tentacles very long and wide, flattened, rolled on the edges. Eyes plain. Rhinophores conical, close together. Penis short, broad, pointed at the tip where it is flat. Foot narrow, with pointed tail. Parapodia large, rounded, smooth edged, joined behind to form a low wall around the mantle cavity. Mantle thin, with small round aperture, sometimes closed. Anal siphon thin, broad, short. ? purple glands. Opaline gland partly compound, small, ducts grouped multiporous. Shell rather broad, ovate, no spire, anal sinus well defined. No radula available.

- Pérou. MM. EYDOUX et SOULEYET, 1838. (1 ex.).
- Lima. M. d'ORBIGNY, 1834. (1 ex. *Type*).

*Aplysia kurodai* Baba 1937.

DISTRIBUTION : Japanese area, Formosa, Asiatic mainland.

Large, colour variable, brown or purplish black, with small irregular greyish mottling all over, foot dark. Skin soft, but not flabby. When contracted assumes the « sitting hare » position. Head and neck long but not large. Penis and sheath small, the former narrow and filiform. Foot large, tough, with short, obtuse tail. Parapodia thin, rounded, flexible, joined low down on the tail. Mantle with small foramen on a papilla, anal siphon short, broad. Purple glands. Ctenidium small and neat. Opaline gland simple, with many apertures. Genital aperture unusually small, crescentic, smooth edged. Shell oval, narrow, sinus shallow. Radula  $70 \times 43$ . 1. 43, teeth with numerous irregular denticulations.

— Nouvelle-Hollande. M. J. VERREAUX. (1 ex.).

— Port-Arthur, Nouvelle-Hollande. M. J. VERREAUX, 1844. (1 ex.).

— Yokohama. M. BOUCARD, 1903. (1 ex.).

*Aplysia fasciata* Poiret 1789.

SYNONYMS : see Pilsbry 1895, p. 72.

DISTRIBUTION : Red Sea, Mediterranean, Atlantic coasts from France to Portuguese West Africa (Angola), Canary Islands.

Large, high and narrow, firm. Black to grey, with or without white flecks, sometimes red border to the parapodia. Skin soft. Cephalic tentacles fimbriated, rounded over the mouth. Rhinophores long, conical. Penis filiform. Foot narrow, pale, with pointed tail. Parapodia large, natatory, free behind or joined low down. Mantle foramen small, flat to tubular, may be rayed. Purple secretion. Opaline gland grape-like, uniporous. Genital aperture oblique, fimbriated. Shell large, convex, thin, an elongated oval, anal sinus shallow. Radula  $80 \times 50$ . 1. 50 or more. Denticulations weak.

— Maroc. M. BUCHET, 1903. (1 ex.).

— La Rochelle. M. d'ORBIGNY. (3 ex.).

— Mer Rouge. M. BOTTA. (4 ex.).

— Bassin d'Arcachon. Dr. SIGALAS, 1927. (2 ex.).

— Dakar. M. CHAPER, 1895. (2 ex.).

— Sénégal. M. HEUDELOT. (5 ex.).

— I. Canaries. M. RIPOCHE, 1882. (2 ex.).

*Aplysia oculifera* Adams and Reeve 1848 (50).

SYNONYMS : hirasei Baba 1936 ; ? nodifera Ad. and Reeve 1850.

DISTRIBUTION : Red Sea, Persian Gulf, Seychelles, Mauritius,.



Pakistan, Ceylon, East Indies, South Africa, Formosa, Riu Kiu Islands, Japan, Wesst Australia.

Of medium size, low bulky shape when full grown but less bulky than *A. dactylomela*, with which it is sometimes confused. Colour dull green or yellowish brown, covered all over the sides, but not on the mantle, tentacles or foot, with small black or brown rings, subequal in size and averaging 1 mm in diameter. There may be mottled areas between the rings, centres buff to white. Mantle speckled or sooty. Inside of parapodia with vertical bars of brownish green alternating with clear areas. Skin soft but firm. Head and neck elongated, but strongly retractile. Penis short, broad, spatulate or pointed, with a flap at the base. Foot fairly broad, sharply marked off from the sides of the body, tail long, pointed. Parapodia long, but not very high, frilled on the edges, coming close together low down on the foot and either free or forming with the mantle cavity a shallow platform. Mantle rather large and usually rough. No aperture visible, occasionally a papilla. Purple glands. Opaline gland simple, with numerous apertures, though some ducts may coalesce. Genital aperture large, with a thickened and corrugated rim. Shell neat, ovoid, deeply concave, anal sinus shallow. Buccal mass small, radula  $60 \times 38$ . 1. 38, cusps curved, denticulate.

- Amboine. M. VAYSSIÈRE, 1821. (2 ex.).
- Mer Rouge. M. LEFÈVRE. (1 ex. juv.).
- Golfe Persique. M. LECLANCHER, 1844. (1 ex.).
- Mer Rouge. M. BOTTA, 1837. (2 ex.).
- Mer Rouge. M. ROUX, 1839. (9 ex. juv.).

*Aplysia maculata* Rang 1828.

DISTRIBUTION : Mauritius, East coast of Africa to the Cape.

Rather large, with long neck and narrow pointed tail. Colour variable, brownish olive with black or light spots, radiating lines and occasionally a few rings. Or an all-over grey effect. Parapodial rims unpigmented. Rhinophores set well back and close together. Penis short, broad at the base but tapering. Foot narrow, its lateral edges projecting as a flange all round. Parapodia large, extending from close behind the rhinophores to the root of the tail, thin, tall and flexible but not fimbriated, natatory. Mantle large, with small flat foramen, which may close. Purple glands. Opaline gland simple, multiporous. Shell elongated, thin and shallow, with short, slight anal sinus. Radula  $50 \times 38$ . 1. 38 with deeply cut denticles on the long cusped laterals.

- 1 ex. sans origine.

RÉFÉRENCES

ADAMS (A.) and REEVE (L.A.). 1848-50. The Zoology of the Voyage of H. M. S. Samarang, 1843-6. London.

- ALLAN (J. K.). 1932. A new genus and species of sea slug and two species of sea hares from Australia. *Rec. Austr. Mus. Sydney*, **18**, 6, 314-320.
- BABA (K.). 1937. Opisthobranchia of Japan, 1. *Journ. Dept. Agric. Kyushu Univ.* **5**, 4, 195-236.
- COOPER (J. G.). 1863. On new or rare Mollusca inhabiting the coast of California. *Proc. Cal. Acad. Sci.* **3**, 56-60.
- CUVIER (G. L.). 1803. Mémoire sur le genre *Laplysia*, vulgairement nommé Lièvre marin, sur son anatomie et sur quelques-unes de ses espèces. *Ann. Mus. Nat. Hist. Paris*, **2**, 287-314.
- DALL (W. H.) and SIMPSON (C. T.). 1901. The Mollusca of Porto Rico. *Bull. U. S. Fish. Comm.* **20**. Part 1, 353-516.
- GOULD (A. A.). 1852. Mollusca and Shells of the U. S. Exploring Expedition, 1838-42. *Phila.* **12**, 223-226.
- MÖRCH (O. A. L.). 1863. Contributions à la faune malacologique des Antilles danoises. *Journ. de Conchyl.* **11**, 3<sup>e</sup> sér., 3, 21-48. Paris.
- d'ORBIGNY (A.). 1835-1843. Voyage dans l'Amérique Méridionale, 1826-33. Tom **5**, Mollusques, 1-758. Paris.
- POIRET (J. L. M.). 1789. Voyage en Barbarie, 2.
- PILSBRY (H. A.). 1895. in Tryon's Manual of Conchology. *Phila.* **16**, 1-112.
- QUOY (J. R. C.) and GAIMARD (P.). 1832. Voyage de découvertes de l'Atrolabe, 1826-29. Paris, Tom. **2**, Mollusques.
- RANG (Sander.) 1828. Histoire naturelle des Aplysiens, première famille de l'ordre des Tectibranches. in FÉRUSAC : Hist. nat. gen. et partic. des Mollusques, Paris.
- SOWERBY (G. B.). 1869. in REEVE (L. A.). *Conchologia Iconica*, **17**. Monograph of the genus *Aplysia*.

*Laboratoire de Malacologie du Muséum  
et University of Reading, England.*